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Phospho-p27Kip1(T198) Antibody Blocking peptide

Synthetic peptide
Catalog # BP3529a

Specification

Phospho-p27Kip1(T198) Antibody Blocking peptide - Product Information

Primary Accession P46527

Phospho-p27Kip1(T198) Antibody Blocking peptide - Additional Information

Gene ID 1027

Other Names
Cyclin-dependent kinase inhibitor 1B, Cyclin-dependent kinase inhibitor p27, p27Kip1, CDKN1B, KIP1

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP3529a was selected from the region of human Phospho-p27Kip1-T198. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Phospho-p27Kip1(T198) Antibody Blocking peptide - Protein Information

Name CDKN1B {ECO:0000303|PubMed:20824794}

Function
Important regulator of cell cycle progression. Inhibits the kinase activity of CDK2 bound to cyclin A, but has little inhibitory activity on CDK2 bound to SPDYA (PubMed:28666995). Involved in G1 arrest. Potent inhibitor of cyclin E- and cyclin A-CDK2 complexes. Forms a complex with cyclin type D-CDK4 complexes and is involved in the assembly, stability, and modulation of CCND1-CDK4 complex activation. Acts either as an inhibitor or an activator of cyclin type D-CDK4 complexes depending on its phosphorylation state and/or stoichometry.

Cellular Location
Nucleus. Cytoplasm. Endosome. Note=Nuclear and cytoplasmic in quiescent cells. AKT- or RSK-mediated phosphorylation on Thr-198, binds 14-3-3, translocates to the cytoplasm and

promotes cell cycle progression. Mitogen-activated UHMK1 phosphorylation on Ser-10 also results in translocation to the cytoplasm and cell cycle progression. Phosphorylation on Ser-10 facilitates nuclear export. Translocates to the nucleus on phosphorylation of Tyr-88 and Tyr-89. Colocalizes at the endosome with SNX6; this leads to lysosomal degradation (By similarity)

Tissue Location
Expressed in kidney (at protein level) (PubMed:15509543). Expressed in all tissues tested (PubMed:8033212) Highest levels in skeletal muscle, lowest in liver and kidney (PubMed:8033212).

Phospho-p27Kip1(T198) Antibody Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Phospho-p27Kip1(T198) Antibody Blocking peptide - Images

Phospho-p27Kip1(T198) Antibody Blocking peptide - Background

p27Kip1 is a cyclin-dependent kinase inhibitor, which shares a limited similarity with CDK inhibitor CDKN1A/p21. This protein binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, and thus controls the cell cycle progression at G1. The degradation of this protein, which is triggered by its CDK dependent phosphorylation and subsequent ubiquitination by SCF complexes, is required for the cellular transition from quiescence to the proliferative state.

Phospho-p27Kip1(T198) Antibody Blocking peptide - References

Kawamata, N., et al., Eur. J. Haematol. 74(5):424-429 (2005).Andreu, E.J., et al., Cancer Res. 65(8):3264-3272 (2005).Wingate, H., et al., J. Biol. Chem. 280(15):15148-15157 (2005).Wang, C., et al., J. Biol. Chem. 280(13):12339-12343 (2005).Rassidakis, G.Z., et al., Blood 105(2):827-829 (2005).